

**DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
333 Market Street, Room 923
San Francisco, California 94105-2195**

CESPD R 1110-1-8

CESPD-ET
CESPD-PM

CESPD Regulation
No. 1110-1-8

26 May 2000

QUALITY MANAGEMENT PLAN

TABLE OF CONTENTS

<u>Subject</u>	<u>Page</u>
1. Purpose	1
2. Applicability	1
3. References	1
4. Definitions	1
5. Division Policy on Quality Management	5
6. District Quality Control Responsibilities	5
7. CESPD Quality Assurance Responsibilities	11

APPENDICES

Appendix A - Tables
Appendix B - Acronyms
Appendix C - Planning Subplan
Appendix D - Engineering Subplan
Appendix E - Real Estate Subplan
Appendix F - Construction - Operations Subplan
Appendix G - Programs Management Subplan
Appendix H - Model Quality Control Certification

**DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
333 Market Street, Room 923
San Francisco, California 94105-2195**

CESPD R 1110-1-8

CESPD-ET
CESPD-PM

CESPD Regulation
No. 1110-1-8

26 May 2000

QUALITY MANAGEMENT PLAN

1. Purpose

This regulation provides the general policy and procedures for the execution of quality management activities in the South Pacific Division (CESPD), and in the districts and other field operating activities within the South Pacific Division.

2. Applicability

This plan applies to all technical activities of CESPD and its districts having responsibilities for: Civil Works, Military, HTRW, SFO, WFO and Real Estate products and projects from planning of these through their construction, operation and maintenance; and, programs and project management services and subproducts associated with product and project development. The plan shall be reviewed annually and updated as appropriate.

3. References

- 3.1. CECW-A EC 1165-2-203, Technical Policy Compliance Review.
- 3.2. ER 5-1-11, Program and Project Management.
- 3.3. CESPD Regional Project Management Business Process.
- 3.4. Charter for District Support Teams
- 3.5. See subplans in appendices for references applicable to the quality management practices of the individual functional elements.

4. Definitions

- 4.1. *Acronyms.* A list of acronyms used in this plan is given in Appendix B.
- 4.2. *Customer.* The owner, client, local sponsor, user or beneficiary of a service, product or project.
- 4.3. *Contractor.* Other than in-house forces, such as other Corps offices, other government agencies or private contractors.
- 4.4. *Design Checks and Other Internal Review Processes.* Detailed review and checking which must be carried out as routine management practices in each of the respective functional

elements. Such review includes checking basic assumptions and calculations. These checks are performed by staff responsible for the work, such as supervisors and work leaders, and shall be performed prior to conduct of independent technical reviews.

4.5. *Decision Documents.* A decision document is any report prepared for the purpose of obtaining project authorization or modification, commitment of Federal funds for project implementation, and approval to spend/receive funds as a result of entering into agreements with other agencies or organizations including those to obtain Congressional authorization.

4.6. *Engineering Quality Procedures (EQP).* As part of ISO9000, all procedures shall state a purpose, scope, references, definitions, responsibilities, description of process activities, and required records. The procedure identifies who does what, when, and where, and may describe how and why the activity is carried out.

4.7. *Functional Chiefs.* For the purposes of this plan, these are the chiefs of the functional elements within DETS at CESPD (Real Estate, Planning, Engineering and Construction-Operations), as well as Program Management, and their counterparts at the Districts.

4.8. *Implementation Documents.* Any document prepared for purposes of executing a project in accordance with its authorization.

4.9. *Independent Technical Review (ITR).* A review by a qualified person or team, not affiliated with the development of a project/product or the supervision of such, for the purpose of confirming the proper application of clearly established criteria, regulations, laws, codes, principles and professional procedures.

4.10. *Independent Technical Review Team (ITRT).* An interdisciplinary group formed to perform the independent technical review. Same as "Review Team" in this Quality Management Plan.

4.11. *Management System.* What the organization does to manage its processes, or activities.

4.12. *Product.* Any deliverable, either by itself or in combination with other deliverables, that results in a project which is intended to produce a specific expected outcome or solution to a customer problem or need.

4.13. *Product Development Team.* An interdisciplinary group formed to develop a product. For Civil Works projects, it is this team that produces a decision or implementation document.

4.14. *Program.* A group of projects, services or other activities that may be categorized by funding source, customer requirements or other common criteria for which resources are allocated and collectively managed.

4.15. *Program Management.* The component of the Program and Project Management Business Process (PMBP) used by all USACE levels to manage a collection of similar projects, activities and services derived from assigned missions.

4.16. *Program and Project Management Business Process (PMBP)*. The corporate management approach which was established in reference 3.2 for execution of all USACE programs and projects.

4.17. *Project*. Any combination of work (product, services, etc.) intended to produce a specific expected outcome or solution to a customer problem or need. A project has the following characteristics: (1) Requires the application of one or more of the following professional practice and knowledge areas: planning, engineering, construction, operations and maintenance, real estate and environmental science; (2) Is performed by the Corps for a customer, either a specific entity or the Nation as a whole; and, (3) Has a defined scope, schedule, cost and criteria for performance measurement.

4.18. *Project Engineer*. Serves the PM role in the design district when the design district is not the geographic district for the project and the PM is in the geographic district.

4.19. *Project Management*. The component of the PMBP used by USACE for delivering individual projects to our customers.

4.20. *Project Manager*. The project manager is that person who is responsible for overall coordination and development of a project.

4.21. *Quality*. Conformance to properly developed and agreed upon requirements.

4.22. *Quality Assurance (QA)*. Quality assurance is the oversight of the quality control processes to insure their effectiveness in the production of quality products.

4.23. *Quality Control (QC)*. The process employed to ensure the performance of a task that meets the agreed upon requirements of the customer and appropriate laws, regulations, policies and technical criteria on schedule and within budget.

4.24. *Quality Control Certification*. A statement declaring that the quality control process conducted in support of product development has been satisfactorily concluded and that all technical issues that have been raised regarding the product have been resolved.

4.25. *Quality Control Plan (QCP)*. A plan which establishes the documents and products to be reviewed, the review team and its responsibilities, the schedule and costs for reviews, the agreed upon requirements of the customer, and the appropriate laws, regulations, policies and technical criteria for development of the study/product.

4.26. *Quality Management (QM)*. Practices and business procedures to ensure the quality of a technical product, encompassing all aspects of product development, including planning, engineering, real estate, construction-operations and programs and project management.

4.27. *Quality Management Plan (QMP)*. A plan stating the quality management practices and business procedures to ensure the quality of a technical product. It encompasses all aspects of product development, including planning, engineering, real estate, construction-operations and programs and project management.

4.28. *Quality System (QS)*. The organizational structure, procedure, process and resources needed to implement quality management. (ISO 8402)

4.29. *Regional Project Management Business Process (RPMBP)*. The corporate management approach established for execution of all programs, projects and services within CESPD and its districts.

4.30. *Responsible Function Chief*. Functional chief with primary responsibility for the technical quality of a product as defined in function statements and the appendices to this QMP.

4.31. *Review Team*. An interdisciplinary group formed to perform the independent technical review. Same as "Independent Technical Review Team" in this QMP.

4.32. *Review Team Leader*. The individual responsible for coordinating all activities of the review team. Same as Independent Review Team leader in this QMP.

4.33. *Seamless Review*. In-progress reviews made by members of the review team during product preparation.

4.34. *Support for Others (SFO)*. Projects for customers outside of the Department of Defense.

4.35. *Technical Products*. All deliverables are referred to as technical products, including real estate, decision and implementation documents, plans and specifications, and programs and project management documents, such as PCAs, PMPs and PED agreements, that include the integration of technical products from multiple functional elements. They include completed deliverables that are ready for transmission to other members of the product development team, outside of the element that performed the work.

4.36. *Technical Review*. Technical Review focuses on compliance with established policy, principles and procedures using clearly justified and valid assumptions. It includes the verification of assumptions, methods, procedures, and material used in analyses based on the level of complexity of the analysis. It verifies the alternatives evaluated, appropriateness of data used and level of data obtained, functionality of the product and verifies the reasonableness of the results including whether the product meets the customer's needs consistent with law and existing policy and engineering and scientific principles.

4.37. *Total Army Quality (TAQ)*. Similar to TQM (below), the application of quantitative methods and people to meet the needs of end users and to assess and improve all significant processes in the organization.

4.38. *Total Quality Management (TQM)*. The application of quantitative methods and people to meet the needs of end users and to assess and improve all significant processes in the organization.

4.39. *Value Engineering (VE)*. A function oriented, systematic team approach to balance performance and cost. Typical value engineering studies are performed under the direction of an experienced facilitator using a multi-discipline team which breaks down the project into

functional performance elements. Cost and benefits are assigned to each element and evaluated. Creative options are then sought when there is a mismatch between value and cost.

4.40. *Work for Others (WFO)*. Non-traditional projects within the Department of Defense.

5. Division Policy on Quality Management

5.1. The quality management (QM) principles outlined in this quality management plan support the three major goals of the CORPS PLUS Strategy:

5.1.1. Revolutionize Effectiveness: Through sound QM practices, CESPD and its districts will ensure that optimal district performance and customer satisfaction are achieved;

5.1.2. Seek Growth Opportunities: QM ensures that CESPD and its districts will be in a position to meet Army and national needs through a continuous process of enhancing our capabilities; and,

5.1.3. Invest in People: QM also ensures that leadership and a well trained workforce will enhance our value to the Army and to the Nation.

5.2. It is the policy of CESPD and its districts to develop quality systems and implement quality management practices, including quality assurance (QA) and quality control (QC), that ensure that technical products meet the agreed upon requirements of the customer and appropriate laws, policies and technical criteria, on schedule and within budget. Adherence to quality principles and established quality assurance and quality control practices is integral with the roles and responsibilities of all CESPD and district functions. QA and QC practices outlined herein shall also be an integral part of the CESPD Regional Project Management Business Process and be consistent with other quality management practices prescribed by USACE, including Total Quality Management (TQM), Total Army Quality (TAQ), Value Engineering (VE) and ISO 9000. General guidance on QA and QC responsibilities and practices is given below. Exceptions to the general guidance and guidance specific to the unique responsibilities and programs within the Planning, Engineering, Real Estate, Construction-Operations and Programs and Project Management functions are given in Appendices C through G, respectively.

6. District Quality Control Responsibilities

6.1. *Objectives*. Districts shall be responsible for developing quality systems and following quality management practices and business procedures to insure quality products. This includes all interim products that are required for the development of an end product, from the inception of planning through construction-operation. These objectives shall be met by development and execution of Quality Management and Quality Control Plans and associated quality control activities.

6.2. *Execution*. The quality control responsibilities shall be executed consistent with the guidance set forth herein and with each district's Quality Management Plan. Subplans (see appendices) are provided herein describing quality control responsibilities for the products that

are the primary responsibility of the Planning, Engineering, Real Estate, Construction-Operations, and Programs and Project Management functions.

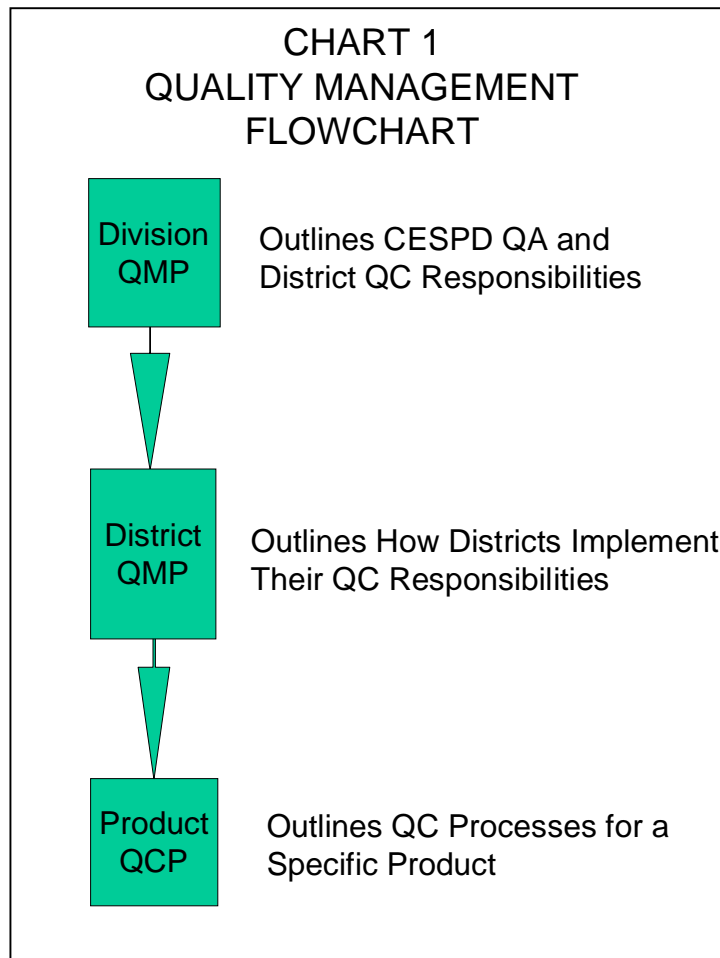
6.3. *District Quality Management Plan (QMP)*. Each district, in a coordinated effort of their Planning, Engineering, Real Estate, Construction-Operations and Programs and Project Management Divisions shall establish, and update annually, an integrated District Quality Management Plan (QMP) that complies with the policy and principles presented in this plan and in applicable USACE regulations. These QMPs and revisions to such shall be reviewed and approved by CESPD. Chart 1 provides an overview of the relationship of the Division and District QMPs.

6.4. *Quality Control Plan (QCP)*.

6.4.1. Requirements for Product Specific QCPs: A quality control plan (QCP) shall be prepared for every product or service, whether obtained

using in-house or contractor forces, updated as warranted and reviewed annually. Contract forces may include other Corps of Engineers offices, other government agencies and private industry sources. The QCP should include, at a minimum, the items listed in paragraph 6.1 of reference 3.1 above, as well as a description of the resources required to accomplish the activities outlined in the QCP. Guidance specific to functional elements may be found in the individual subplans to this QMP.

6.4.2. Requirements for Generic and Programmatic QCPs: Routine or minor products may utilize generic QCPs consistent with overall QA/QC roles. Programmatic QCPs may be developed and utilized for ongoing or continuous programs. Products involving non-routine and/or complex analyses should utilize a product specific QCP. Generic and programmatic QCPs shall include a general description of the items listed in paragraph 6.1 of reference 3.1 above, and shall be updated annually. A one page Supplement to the QCP shall be developed for each product for which a generic or programmatic QCP is used to document the selection of product development and review teams, review schedule and costs and to provide any other needed details. The supplement to the QCP shall be developed and approved within 30 days after initiation of product development and shall be maintained in the product file. A list of products for which a generic or programmatic QCP is used shall be maintained with the QCP.



6.4.3. Responsibilities: A single QCP shall be developed which encompasses the Planning, Engineering, Real Estate, Construction-Operations and Programs and Project Management aspects of a particular product or service. The functional element having primary responsibility for the technical quality of a product shall be responsible for development of the QCP for that product with input from all the other functional elements involved in development of the product. The QCPs should include a requirement for consistency review between the decision or implementation document and any supporting NEPA document(s). Table A-3 of Appendix A provides an overview of QCP requirements for in-house and A-E products.

6.4.4. Review and Approval: The responsibility for review and approval of QCPs is delegated by CESPD to its districts. Monitoring of the development, approval and execution of QCPs remains a CESPD quality assurance responsibility. QCPs, including generic and programmatic QCPs and supplements thereunto, shall be developed and approved by the responsible function chief within 30 days of initiation of product development and within 30 days of the implementation of major revisions. Substantive efforts on product development shall not be undertaken without an approved QCP. Exceptions to the minimum requirements for QCPs set forth herein and reasons for the exceptions must be submitted to the responsible function chief for review and approval. See Appendix A, Table A-1 for a general listing of items requiring QCPs.

6.5. *Quality Control Activities.*

6.5.1. Responsibilities: The chief of each functional element within the district shall have overall responsibility for the technical quality of products as assigned in function statements and the appendices to this QMP. Other function chiefs, the product development team, the project manager, the review team and the review team leader also have significant roles and responsibilities in achieving quality products. These roles and responsibilities shall be described in the district's QMP and shall include the responsibilities that are outlined in each functional element's subplan in the enclosed appendices.

6.5.2. Initial Technical Review Strategy Sessions: The initial technical review strategy session shall form the basis for a quality control plan for all major products. This session shall be held early in the product development phase. The PM shall chair the initial technical review strategy session unless it is combined with another formulation/scoping meeting in which case the initial TRSS would be chaired by the responsible function chief. Also attending would be the functional chiefs and representatives of the customer. CESPD representatives may also attend these sessions in a quality assurance role. In addition to establishing the independent technical review team, the participants shall establish the ITRT leader, level of review, cost and schedule of review, identify documents to be reviewed and identify policy or major technical issues that need to be brought to the attention of CESPD for resolution early in the product development. For products of an uncomplicated or routine nature, the initial technical review strategy session may be waived by the responsible function chief.

6.5.3. Independent Technical Review: Key to the successful execution of the quality control process for the products developed by the Planning, Engineering and Real Estate Divisions and their contractors as well as certain products of Construction-Operations and Programs and Project Management Divisions is the independent technical review of a product. This review

shall be accomplished by an independent technical review team (ITRT) composed of individuals having expertise in and representing all disciplines involved in the type of product being developed and reviewed, who have a minimum of five years experience in the discipline and who were not involved in product development or supervision thereof. Review team members shall be nominated by the function chief(s) of the technical disciplines involved in product development. In addition, independent technical review of a supervisor's work by a subordinate may not be advisable and any proposal for such must be highlighted in the product QCP. Districts are strongly encouraged to identify and use reviewers from outside of their districts as these individuals would bring a fresh, unbiased look at the product development process. Outside sources of reviewers include other Corps offices, Regional Technical Specialists, Centers of Expertise, government agencies and private A-Es. Independent technical review shall not replace the need for and conduct of design checks or supervisory review of products. Sufficient time and resources shall be allocated to this process commensurate with the risk and complexity of the technical product. Review comments should be constructive in nature, relevant to the product and should contain the following elements: (a) A clear statement of the concern; (b) The basis of the concern; (c) The significance of the concern; and, (d) The specific actions needed to resolve the concern. The review documentation shall include a statement that a reviewer has no comments during a product review if such is the case. Responses to comments shall also be documented including the backcheck by the reviewer of responses to the reviewer's comments. Specific guidance on conduct of this quality control element is given in the individual subplans in the appendices to this document.

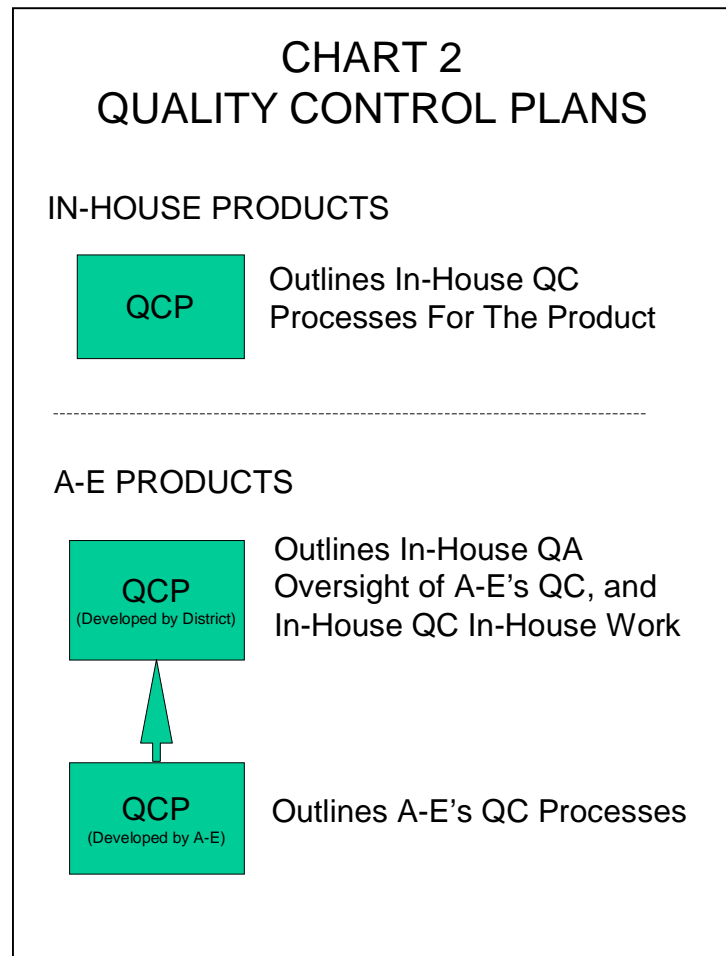
6.5.4. Seamless Review: Subproducts shall be technically overviewed before they are integrated into the overall product. To insure this, product development team members shall consult with their Independent Technical Review Team (ITRT) counterparts at appropriate points throughout the development effort to discuss major assumptions and functional decisions, analytical approaches and significant calculations to preclude significant comments from occurring during the final independent technical review which could adversely impact project schedules and costs. These counterpart discussions should normally be initiated by the subproduct developer. Each discipline shall engage in their own counterpart discussions when appropriate. The conclusions/agreements reached should be documented, with copies retained by each participant and distributed to the ITRT leader and the product development team leader. The documentation shall become part of the product technical review file.

6.5.5. Dispute Resolution: The ITRT leader shall review the products and ITRT comments, product development team responses and backcheck of responses to reviewer's comments to identify any outstanding disagreements between members of the product development team and the ITRT. Any disagreements shall be brought to the attention of the appropriate functional chief to facilitate resolution of technical disagreements between product development and ITRT counterparts. If this interaction does not resolve the issue, the final decision will be made by the responsible functional chief. The functional chief may consult with CESPD staff, who may serve as an unbiased sounding board; or major technical issues may be forwarded to CESPD for resolution.

6.5.6. Technical and Policy Issue Resolution: Issues involving technical and policy interpretation shall be brought to the attention of the chief of the responsible functional element for resolution. In some cases, the chief of the responsible functional element may request that

CESPD hold an issue resolution conference to resolve major policy or technical issues. CESPD may also arrange for HQUSACE participation in the issue resolution conference.

6.5.7. Products Developed by Contractors: Development and execution of a QCP for products developed by a contractor, including architect-engineer (A-E) firms, A-E firms associated with contractors in design-build contracts, other Corps Field Operating Activities and other agencies shall be the responsibility of the contractor. The QCP for the contractor product shall be reviewed and approved by the responsible function chief at the district. In order to maintain contractor responsibility, the contractor shall be responsible for QC of its own work. The District may perform independent technical review of the contractor's work only for special cases when special expertise is required. An overall quality control plan shall be developed by the district that outlines quality control activities by the district for that portion of the product developed by in-house forces and quality assurance activities by the District for overseeing the contractor's quality control activities. The responsible function chief at the district shall review and approve the overall QCP for the total product. Chart 2 illustrates the above requirements.



6.5.8. Final Documentation and QC Certification: Proper documentation is another key component of an effective quality control process. Significant comments, issues and decisions must be recorded and the entire process must leave a clear audit trail. The documentation and certification of the independent technical review and other quality control activities, and where appropriate the District's quality assurance processes prescribed in a product's QCP, shall be made part of the project file and shall be included with the submission of a specific product to CESPD. QC certification requirements are outlined in Table A-3 of Appendix A and are also summarized below.

6.5.8.1. For interim (preliminary) products which the responsible function chief either approves or transmits to CESPD, the responsible function chief shall certify that the quality control process for that product has been completed and that all technical issues that have been identified have been resolved.

6.5.8.2. For final products, which are either approved at the District or by CESPd or headquarters, the responsible function chief shall recommend to the District Commander (DE) that the DE sign the certification. The District Commander's certification shall not be down delegated.

6.5.8.3. A model QC certification for products developed either wholly or partially by in-house forces is provided in Appendix H.

6.5.8.4. For products developed by A-Es or A-E firms associated with design-build contracts, the A-E shall execute an A-E Quality Control Certification (model provided in Appendix H) and provide a copy of this certification to the District. The A-Es independent technical review team leader shall recommend to a principal of the A-E firm that the principal sign the QC certification. The A-E's Quality Control Certification shall be made part of the district's overall quality control certification of the product.

6.5.8.5. For products either partially or wholly developed by A-E forces or A-E forces associated with design-build contracts, the district shall execute a Quality Assurance Certification (model provided in Appendix H). The responsible function chief shall recommend to the District Commander that the DE sign the Quality Assurance Certification. The A-Es Quality Control Certification shall be made part of the district's overall quality assurance certification of the product.

6.5.9. Updating of Quality Control Plans: Quality control plans, product specific, generic and programmatic, whether for in-house or A-E work, shall be reviewed annually and updated as warranted. QCPs shall be updated whenever significant changes require modification of the QCP. Upon identification of a needed change, the revised QCP shall be submitted to the responsible function chief for review and approval within 30 days.

6.5.10. Role of the Project Manager: The project manager is the leader of the product delivery team. One of the project manager's roles is to provide adequate time and resources for the quality management activities associated with a product or service, including but not exclusive to the independent technical review team for the review of products and adequate time and resources to the study team to respond to and resolve quality issues. The RPMBP describes the standard operating procedures for team establishment and the team processes. In accordance with these procedures, the project manager shall negotiate the cost and schedule for members of both the study team and the independent technical review team with the appropriate section chiefs. However, in order to preserve the independence of the technical review, the project manager shall not be a member of the independent technical review team. In addition, to ensure that quality expectations are met in accordance with Reference 3.2, the project manager shall ensure that certification requirements are met prior to approval of the product by the District Commander or transmittal of a product to CESPd.

6.5.11. Quality Management Indicator (QMI) Report: District Commanders shall develop performance based measurement systems keyed to the concepts expressed herein. Program areas to report shall include Civil Works, Military, HTRW, SFO, WFO, Real Estate Services and other significant programs. The QMI report also shall include generic, programmatic and supplemental QCPs as well as QCPs developed for A-E products and A-E products from

design-build contracts. The QMI report shall be presented at each district's CMR. Copies of the QMI report shall be provided to the Director, DETS and Director, PM immediately after the District CMR. To support the data presented in the QMI report, each district shall also provide to CESPD a detailed breakdown by functional area showing specific products requiring QCPs, date of initiation of product development and the date the QCPs were approved. A sample QMI Report is provided in Appendix A. At a minimum, the summarized data for the QMI Reports shall include the following:

6.5.11.1. The total number of projects by program area that require QCPs. This number is obtained by determining the total number of products under development in each respective program in the district and subtracting those that were initiated within 30 days of the QMI Report.

6.5.11.2. The total number of products and percentage of products having an approved QCP. This should be presented by program and as a district wide number and percentage.

6.5.11.3. The date of CESPD approval of the current District Quality Management Plan (QMP) and date of the next scheduled update.

6.6. Use of Checklists: Checklists may be used to guide the technical review and ensure that critical items are not overlooked. Checklists may be used to simplify the documentation of the review. Checklists may also be used to track outstanding action items for a particular study. The use of checklists shall not, however, eliminate the requirement to document specific comments. Sample checklists of items to consider during a review for civil works related products are included in Reference 3.3, Appendix B – Policy Compliance Review Considerations and in the Internal Control Review Checklist for Reference 3.2.

6.7. Lessons Learned. The development of a CESPD-wide lessons learned program is being led by CESPD-ET-E. In the interim, each district should take maximum advantage of lessons learned and share these lessons at appropriate workshops and conferences.

7. CESPD Quality Assurance Responsibilities

7.1. *Objectives.* In accordance with the MSC Quality Assurance focus areas identified by HQUSACE, the South Pacific Division shall be responsible for conduct of quality assurance activities to assure the following:

7.1.1. Mechanisms and procedures are in-place to enable the districts and their contractors to:

7.1.1.1. Produce quality products that comply with established criteria, methods and procedures, and

7.1.1.2. Apply competent technical resources to decisions and reviews.

7.1.2. Districts and their contractors plan, design and construct safe, functional, cost effective and environmentally sustainable products that accomplish authorized purposes and meet or exceed customer's expectations.

7.1.3. The Districts and their contractors develop and execute quality control plans that:

7.1.3.1. Provide a level of detail appropriate to the type, complexity and acceptable level of risk of the product;

7.1.3.2. Are consistent with guidance provided; and

7.1.3.3. Provide for documentation of quality control actions, including reviews, comments and resolution of comments.

7.2. *Execution.* Quality assurance responsibilities shall be executed consistent with CESPD functional statements and are an integral part of the RPMBP. The chief of each functional element within CESPD shall have overall responsibility for quality assurance activities of products within their respective functional elements and missions, and shall be supported in their QA activities by the chiefs and staffs of the other functional elements of CESPD as noted below. Functional elements within CESPD have prepared subplans (see appendices) to execute their quality assurance responsibilities based on their functional statements and reflecting the products that are within their functional area and responsibility. Chart 1, above, provides an overview of quality management processes. CESPD's quality assurance focus areas include:

7.2.1. Focus Area #1: Develop and Maintain the CESPD Quality Management Plan: CESPD has developed this Division's Quality Management Plan, outlining the policies and procedures that all functional areas within CESPD shall follow for their quality assurance activities and that all functional areas within the districts of CESPD shall follow for their quality control responsibilities for in house products and for their quality assurance responsibilities of A-E work. The Division QMP shall be reviewed annually and updated as warranted.

7.2.2. Focus Area #2: Review and Approve District Quality Management Plans: CESPD shall review and approve each district's Quality Management Plan, and annual updates thereof, which shall outline the policies, procedures and responsibilities of all functional areas for producing quality products and services. District QMPs shall be reviewed annually and updated as warranted.

7.2.3. Focus Area #3: Monitor Development and Execution of Product Quality Control Plans : CESPD shall ensure that procedures are in place within each district for the development, review, approval and execution of product specific, generic and programmatic QCPs. The authority for review and approval of QCPs is delegated by CESPD to its districts. CESPD shall ensure compliance with approved QCPs by periodically verifying the independence of independent technical reviews (ITR), resolution of comments, documentation, etc. CESPD shall oversee the district's QA role when the district conducts QA activities for A-E and other contracted products. This also includes oversight of district QA plans for monitoring construction contractor's QCPs.

7.2.4. Focus Area #4: Audit District Quality Processes. CESPD shall review district products as an element of QC Process Evaluation. This includes meeting periodically with districts to review their quality control processes through evaluation of selected products and services at

various stages of development to assure compliance with the Division and District QMPs. Feedback to the district on these quality assessment audits is essential for district process improvement and as feedback to districts for lessons learned processes.

7.2.4.1. General: CESPD shall selectively audit the districts' QC processes, which may include spot-checking specific technical products to assure the quality of the review and the resulting quality of the technical products. These reviews shall be for the purpose of identifying system problems, trends and possible improvements to the quality management and quality control process, serve as feedback to HQUSACE as part of the lessons learned process and assure compliance with current CESPD and HQUSACE policy. The selection of products for detailed audits shall be based on a number of criteria, including: the expressed needs and concerns of the district, new processes or techniques, or product types that have poor performance histories. Audits shall be conducted on an annual basis to assess each district's quality management processes. However, determination of the need for an audit may be made at any time during product development. The audit process may take many forms as discussed in the subplans to this QMP. Audits will be conducted on the quality management of a district's products in compliance with HQUSACE, CESPD and each individual district's quality management guidance and as they support customer satisfaction and the Corps vision:

<i>Align for Success</i>	How does each district implement the quality management guidelines?
<i>Satisfy the Customer</i>	What have been the measures of success in the district's Civil Works and Support for Others programs?
<i>Serve the Army</i>	What have been the measures of success in the district's Military, HTRW and Work for Others programs?

7.2.4.2. Focus of Quality Assurance Audits: The focus of the quality assurance audits shall be on the quality management processes used by the district to assure development of a high quality product whether developed in-house or by an A-E. Review of the quality management processes for selected district products will be used in assessing and rating each district's implementation of the appropriate quality management guidance. In addition, discussions with district personnel shall be part of the audit process to assess the conduct of quality control activities associated with a specific product as well as the successes and needs for improvement of the quality management of the various district programs. Checklists for the audit will be one tool used in assessing and developing the rating for each district's quality management program. Discovery of problems with the district's quality management processes may necessitate obtaining additional information from the district to address CESPD concerns.

7.3. Focus Area #5: Review and Evaluate Performance Indicators. CESPD shall proactively track existing HQUSACE performance indicators and develop and maintain regional indicators as required. This includes the quarterly district Quality Management Indicator report previously described in paragraph 6 above. CESPD also shall identify areas needing command attention

to assure a viable organization that is responsive to USACE customers through quality products.

7.4. Focus Area #6: Continuous Involvement in Product Development. CESPD shall participate in selected project meetings as required by policy guidance and as needed for high visibility and/or complex projects. CESPD shall assist in resolution of policy and/or technical issues and interface with HQUSACE as appropriate, approve deviations from criteria and conduct selected project site visits, as outlined below:

7.4.1.1. In-Progress Conferences: In-Progress Conferences shall serve as formal quality assurance checkpoints to ensure that quality control has taken place and that appropriate progress, particularly in prolonged product development efforts, is being made in the product development. CESPD participation in these conferences shall be a significant element of CESPD's quality assurance program. Requirements for such conferences are included in the subplans for the various functional elements.

7.4.1.2. Technical and Policy Issue Resolution Conferences (IRC): Issue Resolution Conferences (IRC) may be required during product development. These may be called at the request of: A district to address major issues raised as a result of quality control activities; CESPD, to address major issues raised as a result of quality assurance activities; and, mandatory issue resolution conferences under the respective functional element's umbrella of responsibility. All issue resolution conferences shall be chaired by CESPD.

7.4.1.3. Counterpart Consultations: An essential quality assurance activity shall be informal, counterpart consultations between district and CESPD personnel. These consultations shall be informational "two-way streets", providing CESPD personnel an opportunity to assess whether district and/or contractor activities for product development are in compliance with the established quality control plan and providing district personnel with an informal avenue to CESPD personnel on resolution of unique technical problems and/or issues on product development.

7.4.2. Focus Area #7: Partner, Coordinate and Mentor with District. CESPD shall provide for continuous dialog and interactions with counterparts to keep them informed of upcoming work, training, new regulations, etc. CESPD shall also develop and implement regional guidance, regional training, share lessons learned and facilitate changes in criteria, facilitate partnering and sharing of resources across districts and evaluate district technical capabilities and needs. Quality assurance also includes an evaluation of the district's development and maintenance of the technical competency for production and review of a product.

7.4.2.1. If production and/or review team members with the appropriate technical expertise in a specialty area are not available from within the district, the district must seek such expertise from outside sources, such as other districts, divisions, COE laboratories, Regional Technical Specialists (see below), customer's organizations or private consultants. At the request of the districts, CESPD may provide assistance on seeking such expertise. The approval of a quality control plan for a product shall be the acknowledgement of the credentials of the production and technical review team. To assist in this process, the quality control plan shall include the

technical qualifications of the technical review team, to include the number of years of relevant experience.

7.4.2.2. CESPD shall aid in fostering the technical competency of its Districts through partnering sessions, encouraging the professional development of its staff through training, participation in professional societies and conferences, etc. In addition, CESPD staff are available to provide training on the quality management guidelines and procedures outlined herein.

7.4.2.3. To facilitate identification of personnel with unique technical expertise, membership in and use of the CESPD Skills Inventory and Experts Registry is encouraged.

7.4.2.4. Regional Technical Specialists. The Engineer and Scientist Career Program Planning Board, in May 1997, directed that a strong career ladder for technical disciplines is essential to maintaining CESPD core competencies. With districts being fully responsible for the technical adequacy of products, the establishment of enhanced non-supervisory technical specialist positions at the district level was imperative and a division-wide advisory panel was established. Technical specialist positions are regional in nature, including the workload of the home district as well as the workload of the entire Division. A minimum of 30% of a regional technical specialist position is as a CESPD regional expert, which would include: serving as an independent technical reviewer for other districts, trouble shooting for other districts, or representing the entire Division at meetings and conferences. The other 70% of the position would be directed specifically at the home district's technical requirements. A listing of the technical specialist positions is included on the CESPD homepage.

7.4.3. Focus Area #8: Approve/Certify Programming Activities. CESPD shall ensure coordination of all programming activities with HQUSACE and districts. Detailed descriptions of this responsibility will be provided in separate guidance on the CESPD function of program management.

7.4.4. Focus Area #9: Conduct and Provide Feedback on Command and Staff Inspections. CESPD shall examine mission execution, level of training, FTE resources, workload, compliance with standards and regulations and obtain feedback on morale, welfare, discipline and problems / needs through command inspection visits. The command inspection program shall ensure that district personnel are aware of and comply with all requirements in this quality management plan and in each district's quality management plan in support of the RPMBP. Compliance by the districts and their contractors with this plan shall be discussed during these visits as well as any required corrective actions required to ensure compliance. These visits shall also serve to surface required modifications to the district's quality management plans, product specific, generic and programmatic quality control plans and to this CESPD quality management plan. If a given annual Command Inspection Visit is not focused on quality management, a separate visit shall be conducted for this purpose.

7.5. *District Support Teams.* District Support Teams were chartered by Reference 3.4 to support the districts in the execution of their programs. They are tasked to provide maximum support to the districts in delivering projects to its customers. In the context of quality management, this would include providing oversight and quality assurance of the district's overall quality management program, assisting the districts on project specific issues,

CESPD R 1110-1-8
26 May 2000

performing policy reviews for delegated actions, processing district products through CESPD, HQUSACE and ASA (CW), performing quality assurance audits as well as the full range of quality assurance activities as outlined above. The District Support Teams include members from Planning, Engineering, Construction-Operations, Real Estate and Counsel. The coordination among the members of the District Support Teams is described in Reference 3.4.

7.6. Participation of an individual from CESPD on a product's independent technical review team would compromise that individual's ability to perform quality assurance on that product and is prohibited. CESPD team members not involved in quality assurance activity on a specific technical product may, at the request of a district and with the approval of the Director of DETS or the Director of PM, participate in the technical review of that product. In this situation, the requesting District would be required to fund this review activity.

7.7. Delegated Responsibilities of CESPD: Approval authority for a number of programs has been delegated to CESPD. In addition to quality assurance responsibilities for technical review, CESPD has quality control responsibilities for policy compliance of delegated authorities. In that regard, CESPD is responsible for policy compliance review of products that are approved by the Division Commander. HQUSACE will provide policy QA of programs/documents delegated to CESPD. Procedures for CESPD policy compliance review of all decision documents for delegated programs are addressed within the appropriate subplan. See Appendix A, Table A-2 for list of delegated responsibilities.

8 Appendices
APP A - Tables
APP B - Acronyms
APP C - Planning Subplan
APP D - Engineering Subplan
APP E - Real Estate Subplan
APP F - Construction - Operations Subplan
APP G - Programs Management Subplan
APP H - Model Quality Control Certification

PETER T. MADSEN
Brigadier General, U.S. Army
Commanding

DISTRIBUTION:
(Electronic Copy Available)